CLAIMS

What is claimed is:

1. A moving object monitoring system utilizing a plurality of monitors to monitor a region, wherein each monitor works within a range of angle of monitoring and a range of overlapping angle of monitoring defined the doubly viewed region made possible with a pair of monitors, which automatically monitors a moving object by controlling said plurality of monitors, comprises:

a memory module for recording a plurality of serial images of said moving object taken by said monitor and recording a plurality of to be monitored target patterns for comparing during automatic monitoring;

a target identification module for analyzing said plurality of serial images and generating a plurality of target patterns, which outputs a command of target monitoring whenever said plurality of target patterns match one of said plurality of to-be-monitored target patterns;

a speed calculation unit for calculating the speed at which said target object moves and converting said speed into an angular speed at which said monitor has to rotate while monitoring the target object;

an angle adjustment unit which adjusts the monitoring angles of said monitor according to said angular speed to send out an angle adjustment signal;

A switch unit for switching a monitoring status selected from a single-monitor monitoring status and a two-monitor monitoring status;

a control unit, which retrieves said plurality of serial images stored in said memory module and sends them to said speed calculation unit for the calculation of said angular speed after receiving said command of target monitoring and d receives said angle adjustment signal and sends to said monitor which is monitoring the target, and controls said switch unit to change the monitoring status; and

a connection unit for connecting said memory unit, said target identification module, said speed calculation unit, said angle adjustment unit, said switch unit and said control unit.

2.   The moving object monitoring system of claim 1, further comprises a warning unit connected to said connection unit for sending out a warning signal whenever said system begins to monitor said moving object.

3.   The moving object monitoring system of claim 1, wherein the target identification unit compares said plurality of target patterns with the shapes of said to-be-monitored target patterns and sends out a monitoring command when there is a certain degree of similarity.

4.   The moving object monitoring system of claim 3, wherein said degree of similarity is 70%-100%.

5.   The moving object monitoring system of claim 1, wherein said switch unit switches the monitoring status to a single-monitor monitoring status whenever said monitoring region of said monitor lies within said region to be monitored.

6.   The moving object monitoring system of claim 1, wherein said switch unit switches the monitoring status to a two-monitor monitoring status whenever said monitoring region of said monitor lies within said region to be doubly monitored.

7.   The moving object monitoring system of claim 1, wherein the monitoring status is said two-monitor monitoring status, said control unit retrieves said images of said two monitors and sends to said speed calculation unit for calculating a speed of the moving object, then the speed of the moving object is sent to said angle adjustment unit for figuring out two sets of adjusted angles to make an adjustment in said two monitors.

8.   A method for monitoring moving objects utilizing a plurality of monitors to monitor a region, wherein each monitor works within a range of angle of monitoring and a range of overlapping angle of monitoring defined the doubly viewed region made possible with a pair of monitors, which automatically monitors a moving object by controlling said plurality of monitors, the method comprises the following steps:

set a plurality of to-be-monitored target pattern;

retrieve serial images of said moving object from said monitors that monitor said moving object when said moving object emerges;

generate an identification pattern according to the serial images of said moving object;

compare said identification pattern with said plurality of to-be-monitored target patterns and determine whether said moving object is to be monitored according to a degree of similarity;

generate a target pattern and a new target pattern for said object to be monitored;

calculate a speed of the movement of said object to be monitored according to said target pattern and said new target pattern;

make an adjustment in the monitoring angles of said monitor according to said speed;

switch to a two-monitor monitoring status when the monitoring angles of said monitor switches to said to-be-monitored doubly angle from said to-be-monitored angle; and

switch to a single-monitor monitoring status when said range of the angle of monitoring of one of the two monitors lies outside said range of the overlapping angle of monitoring and the monitoring angle of another monitor switches to said to-be-monitored doubly angle from said to-be-monitored angle.

9.   The method of monitoring moving objects of claim 8, wherein the degree of similarity is acquired by comparing the shapes of the patterns of said moving object with those of said plurality of to be monitored target patterns.

10.   The method of monitoring moving objects of claim 8, wherein said degree of similarity is 70%-100%.

11.   The method of monitoring moving objects of claim 8, further comprises a step for sending out a warning signal follows the step of determining said object to be monitored.

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